Claims

[c1] 1.A method for displaying waveform data on a display device, the method comprising:
apportioning a display region into a first portion and a second portion immediately adjacent to said first portion;
said first portion being used to display a first segment of the waveform data, said first segment comprising the most recently received data extending back to a determined delay period;
said second portion being used to display a second segment of the waveform data, said second segment comprising the remainder of the waveform data;
wherein the data displayed in said first portion has a continuously varying amplitude level adjustment applied thereto for partial baseline correction thereof, and the data displayed in said second portion has a corrected baseline amplitude adjustment with no further amplitude level adjustment applied thereto.

[c2] 2.The method of claim 1, wherein said baseline adjustment is applied through a symmetrical finite impulse response filter.

[c3] 3.The method of claim 2, wherein said symmetrical finite impulse response filter is centered about a given data sample at a time delay of about 0.5 to about 3.0 seconds.

[c4] 4.The method of claim 1, wherein:
the waveform data is scrolled across said display region such that the waveform data initially appears in said first portion, thereafter scrolling through said first portion while being subjected to said baseline amplitude adjustment, and thereafter appearing in and scrolling through said second portion with no further baseline adjustment being applied thereto.

[c5] 5.The method of claim 1, wherein:
a wiper bar is scrolled across said display region such that said first portion of said display region adjacently follows said wiper bar along an edge thereof.

[c6] 6.A method of filtering and displaying sequential waveform data samples, the

method comprising:

shifting a sequence of stored uncorrected data samples;

receiving and storing a new uncorrected data sample;

computing a baseline estimate correction using said stored uncorrected data samples and said new uncorrected data sample;

shifting a sequence of stored corrected data samples and thereafter determining a new corrected data sample, wherein said new corrected data sample is determined by applying said baseline estimate correction to a specific one of said stored uncorrected data samples;

creating a sequence of temporary display data samples by applying said baseline correction to each of said stored uncorrected data samples that were stored subsequent to said specific one of said stored uncorrected data samples, as well as to said new uncorrected data sample; and

displaying said sequence of corrected data samples, said new corrected data sample, and said sequence of temporary display data samples.

[c7] 7.The method of claim 6, wherein said baseline estimate correction is implemented by a symmetrical finite impulse response filter.

[c8] 8.The method of claim 7, wherein said specific one of said stored uncorrected data samples is centrally located within said stored uncorrected data samples.

[c9] 9.The method of claim 7, wherein said baseline estimate correction is applied at a delay of about 0.5 to about 3.0 seconds with respect to said receiving and storing a new uncorrected data sample.

[c10] 10.The method of claim 6, wherein said waveform data samples represent electrocardiogram data.

[c11] 11.An electrocardiogram (ECG) system, comprising:

a set of electrodes for detecting ECG signals from a subject;

signal condition circuitry for conditioning said ECG signals detected by said set of electrodes;

a processor for processing conditioned signals from said signal condition circuitry; and

a display for displaying ECG waveform data produced by said processor, said display further comprising:
a display region having a first portion and a second portion immediately adjacent to said first portion;
said first portion being used to display a first segment of said waveform data, said first segment comprising the most recently received data extending back to a determined delay period; and
said second portion being used to display a second segment of said waveform data, said second segment comprising the remainder of said waveform data;
wherein said waveform data displayed in said first portion has a continuously varying amplitude level adjustment applied thereto for partial baseline correction thereof, and the data displayed in said second portion has a corrected baseline amplitude adjustment with no further amplitude level adjustment applied thereto.

[c12] 12.The ECG system of claim 11, wherein said baseline adjustment is applied through a symmetrical finite impulse response filter.

[c13] 13.The ECG system of claim 12, wherein said symmetrical finite impulse response filter is centered about a given data sample at a time delay of about 0.5 to about 3.0 seconds.

[c14] 14.The ECG system of claim 11, wherein:
said waveform data is scrolled across said display region such that said waveform data initially appears in said first portion, thereafter scrolling through said first portion while being subjected to said baseline amplitude adjustment, and thereafter appearing in and scrolling through said second portion with no further baseline adjustment being applied thereto.

[c15] 15.The ECG system of claim 11, wherein:
a wiper bar is scrolled across said display region such that said first portion of said display region adjacently follows said wiper bar along an edge thereof.

[c16] 16.A storage medium, comprising:
a machine readable computer program code for filtering and displaying

sequential waveform data samples; and

instructions for causing a computer to implement a method, the method further comprising:

shifting a sequence of stored uncorrected data samples;

receiving and storing a new uncorrected data sample;

computing a baseline estimate correction using said stored uncorrected data samples and said new uncorrected data sample;

shifting a sequence of stored corrected data samples and thereafter determining a new corrected data sample, wherein said new corrected data sample is determined by applying said baseline estimate correction to a specific one of said stored uncorrected data samples;

creating a sequence of temporary display data samples by applying said baseline correction to each of said stored uncorrected data samples that were stored subsequent to said specific one of said stored uncorrected data samples, as well as to said new uncorrected data sample; and

displaying said sequence of corrected data samples, said new corrected data sample, and said sequence of temporary display data samples.

[c17] 17.The storage medium of claim 16, wherein said baseline estimate correction is implemented by a symmetrical finite impulse response filter.

[c18] 18.The storage medium of claim 17, wherein said specific one of said stored uncorrected data samples is centrally located within said stored uncorrected data samples.

[c19] 19.The storage medium of claim 17, wherein said baseline estimate correction is applied at a delay of about 0.5 to about 3.0 seconds with respect to said receiving and storing a new uncorrected data sample.

[c20] 20.The storage medium of claim 16, wherein said waveform data samples represent electrocardiogram data.

[c21]

21.A computer data signal, comprising:

code configured to cause a processor to implement a method for, the method further comprising:

shifting a sequence of stored uncorrected data samples;
receiving and storing a new uncorrected data sample;
computing a baseline estimate correction using said stored uncorrected data samples and said new uncorrected data sample;
shifting a sequence of stored corrected data samples and thereafter determining a new corrected data sample, wherein said new corrected data sample is determined by applying said baseline estimate correction to a specific one of said stored uncorrected data samples;
creating a sequence of temporary display data samples by applying said baseline correction to each of said stored uncorrected data samples that were stored subsequent to said specific one of said stored uncorrected data samples, as well as to said new uncorrected data sample; and
displaying said sequence of corrected data samples, said new corrected data sample, and said sequence of temporary display data samples.

[c22] 22.The computer data signal of claim 21, wherein said baseline estimate correction is implemented by a symmetrical finite impulse response filter.

[c23] 23.The computer data signal of claim 22, wherein said specific one of said stored uncorrected data samples is centrally located within said stored uncorrected data samples.

[c24] 24.The computer data signal of claim 22, wherein said baseline estimate correction is applied at a delay of about 0.5 to about 3.0 seconds with respect to said receiving and storing a new uncorrected data sample.

[c25] 25.The computer data signal of claim 21, wherein said waveform data samples represent electrocardiogram data.